No. 76TQ011

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

North Carolina
Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF seventeen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEANUT

'NC 6'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 20th *day of* October *in the year of our Lord one thousand nine hundred and* seventy-seven

PLANT VARIETY PROTECTION OFFICE · U.S. DEPARTMENT OF AGRICULTURE

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(1-76)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
PLANT VARIETY PROTECTION OFFICE
NATIONAL AGRICULTURAL LIBRARY
BELTSVILLE, MARYLAND 20705

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
NC 17167	NC 6	PV NUMBER 76TQ011
2. KIND NAME	3. GENUS AND SPECIES NAME	FILING DATE 8/13/76 — TIME 9:45 A.M.
Peanuts	Arachis hypogaea L.	FEE RECEIVED $250.00 $250.00 $250.00 — DATE 8-13-76 9-30-76 10-5-77
4. FAMILY NAME (BOTANICAL)	5. DATE OF DETERMINATION	
Leguminoseae	April 6, 1976	

6. NAME OF APPLICANT(S)	7. ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)	8. TELEPHONE AREA CODE AND NUMBER
North Carolina Agricultural Experiment Station	North Carolina State University School of Agriculture and Life Sciences Agricultural Experiment Station Box 5847, Raleigh, NC 27607	919-755-2719

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (*Corporation, partnership, association, etc.*)	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
Public Institution		

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

R. W. McMillen, Manager
N. C. Foundation Seed Producers, Inc.
P. O. Box 5687
State College Station
Raleigh, North Carolina 27607

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [X] 13D. Exhibit D, Additional Description of the Variety.

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? *(See Section 83(a). If "Yes," answer 14B and 14C below.)* [X] YES [ ] NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? [X] YES [ ] NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? [X] FOUNDATION [X] REGISTERED [X] CERTIFIED

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal? [X] YES [ ] NO

16. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

8-3-76
(DATE)

Kenneth R. Miller
(SIGNATURE OF APPLICANT)

00001

(DATE)

(SIGNATURE OF APPLICANT)

EXHIBIT A

(Revised)

ORIGIN AND BREEDING HISTORY OF 'NC 6'

'NC 6' is a large-seeded Virginia-type peanut (Arachis hypogaea L.) cultivar that was selected in the fourth generation following a cross of 'GP-NC 343' and 'Va 61R'. GP-NC 343, released by the North Carolina Agriculture Experiment Station as elite germplasm in 1971, is resistant to the larvae of the southern corn rootworm (Diabrotica undecimpunctata howardi Barber). Va 61R is a cultivar released by the Virginia Agriculture Experiment Station in 1961. The cross was made in 1966 and the first three generations were grown in the greenhouse using the single seed descent breeding method. NC 6 was released in the twelfth generation following evaluation of southern corn rootworm resistance from the fifth generation and yielding ability since the sixth generation. NC 6 was observed to be uniform in tests conducted in North Carolina and Virginia during the 1971-76 growing seasons. Any plant recognizable as an off-type is removed during the production of breeders' seed.

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EXHIBIT B

(Revised August 1977)

NOVELTY STATEMENT

'NC 6' most closely resembles 'Florigiant' for many characteristics including growth habit and appearance. NC 6, however, has larger fruit and seeds than Florigiant (Table 1). NC 6 also has a testa that adheres to the kernels with greater tenacity than Florigiant.

In addition to differences for fruit and seeds, NC 6 is resistant to the southern corn rootworm (Diabrotica undecimpunctata howardi Barber) and potato leafhopper (Empoasca fabae Harr.), while Florigiant is susceptible to both of these insects. NC 6 yields 15-20% more than Florigiant in soils with a high infestation of southern corn rootworm that were not chemically treated for insect control. NC 6 averaged 85% less rootworm-damaged pegs and pods than Florigiant (Table 2).

NC 6 has moderate resistance to the potato leafhopper. NC 6 averaged 69% less potato leafhopper damage than Florigiant (Table 3).

EXHIBIT B

76TQ011

NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

SCHOOL OF AGRICULTURE AND LIFE SCIENCES

DEPARTMENT OF CROP SCIENCE
BOX 5155 ZIP 27607

August 25, 1977

Mr. Joseph J. Higgins
Examiner, Plant Variety Protection Office
USDA-ARS, Grain Division
National Agricultural Library
Beltsville, Maryland 20705

Dear Mr. Higgins:

Enclosed is a revised Exhibit B for peanut application No. 76TQ011 'NC 6'. The revisions have been made as you advised in your letter of May 2, 1977.

Your statement that 'Virginia 72R' and 'Tifrun' have many traits in common with 'NC 6' is probably correct. Tifrun has much smaller fruit and is a completely different market type than NC 6. NC 6 is marketed as a large-seeded Virginia, while Tifrun is marketed as a runner. We do not grow Tifrun in North Carolina because we have traditionally grown large-seeded Virginias (Virginias is common term contrasted to Runners). It is unfortunate that you find that Va 72R is earlier maturing than NC 6. The opposite has been found in our experience. NC 6 is later than NC 17, almost comparable with Florigiant and earlier than NC 5 and Va 72R under North Carolina growing conditions. We have found that NC 6 has larger fruit (fancy size), greater percentage extra large, high SMK (meat content), longer fruit, and lower count per pound of fruit than Virginia 72R. Of even greater significance is the fact that NC 6 can be distinguished from Va 72R by lesser damage from potato leafhoppers, southern corn rootworm and tobacco thrips. It is extremely unfortunate that your computer search is unable to verify these differences.

Nevertheless, 'NC 6' most closely resembles Florigiant. The growth habit of NC 6 is similar to Florigiant but NC 6 can be distinguished from Florigiant by its larger fruit and greater percentage of extra large kernels, by its resistance to potato leafhopper and southern corn rootworm and by the tighter fitting testa which makes NC 6 harder to blanch than Florigiant.

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EXHIBIT B

Table 1. Fruit and seed sizes of NC 6 and Florigiant varieties grown in the 1973-75 Virginia-North Carolina Peanut Variety and Quality Evaluation Program (digging 1, six locations).

Variety	% Fancy size[1]				% Extra large kernels[2]			
	1973	1974	1975	Avg	1973	1974	1975	Avg
NC 6	87a[3]	85a	89a	87a	43a	40a	47a	43a
Florigiant	82b	84a	84b	83b	38b	29b	35b	34b

[1] In-shell peanuts that ride a 34/64 x 3-in. screen.

[2] Seeds which ride a 21.5/64 x 1-in. screen.

[3] Means with different letters are significantly different at 5% level of probability.

76TQ011

EXHIBIT B

Table 2. Southern corn rootworm damage to NC 6 and Florigiant peanut varieties during 1972-75 at Lewiston, N. C.

Variety	No. damaged peanut fruits					
	1972	1973	1974	1975(1)	1975(2)	Avg
NC 6	10.3a[1]	13.0a	13.3a	10.3a	16.7a	12.7a
Florigiant	58.3b	133.3b	105.7b	60.8b	60.4b	83.7b

[1]Means with different letters are significantly different at 5% level of probability.

76TQ0.11

EXHIBIT B

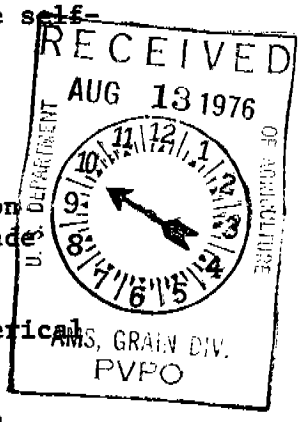
Table 3. Potato leafhopper injury to NC 6 and Florigiant peanut varieties during 1973-75 at Lewiston, N. C.

Variety	% Leafhopper damage			
	1973	1974	1975	Avg
NC 6	20.0a[1]	18.3a	10.0a	16.1a
Florigiant	55.0b	41.7b	58.3b	51.7b

[1]Means with different letters are significantly different at 5% level of probability.

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, National Agricultural Library, Beltsville, Maryland 20705. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.



ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in Section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give (1), the genealogy, including public and commerical varieties, lines, or clones used, and the breeding method. (2), the details of subsequent stages of selection and multiplication. (3), the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4), evidence of stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties; (1) identify these varieties and state all differences objectively; (2) Attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form for all characteristics, for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe; such as; plant habit, plant color, disease resistance, etc.

14A If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

76 TQ 011

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-29
(6-17-74)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

OBJECTIVE DESCRIPTION OF VARIETY
PEANUT (Arachis hypogaea)

NAME OF APPLICANT(S)
North Carolina Agricultural Experiment Station

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)
North Carolina State University
School of Agriculture & Life Sciences, Agri. Exp. Sta.
Box 5847, Raleigh, North Carolina 27607

VARIETY NAME OR TEMPORARY DESIGNATION
NC 6

FOR OFFICIAL USE ONLY
PVPO NUMBER
76 TQ 011

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. BOTANICAL TYPE:

[1] Flowering on the Main Stem: 1 = ABSENT 2 = PRESENT

[1] Branching Pattern: 1 = ALTERNATE – Pairs of vegetative & reproductive branches (Virginia) 3 = OTHER (*Specify*) _____
2 = SEQUENTIAL – Continuous reproductive branches (Valencia–Spanish) _____

2. PLANT:

[1] Habit: 1 = PROSTRATE (*Florunner*) 2 = DECUMBENT (*NC–5*) 3 = SEMI-ERECT (*Florispan*) 4 = ERECT (*Starr*)

[3] Branching: 1 = SPARSE (*Valencia*) 2 = MODERATE (*Starr*) 3 = PROFUSE (*Florunner*)

3. MATURITY:

[1] Region: 1=VIRGINIA, NORTH CAROLINA 2 = S.E. UNITED STATES 3=S.W.UNITED STATES 4=OTHER

[1][5][0] NUMBER OF DAYS TO MATURITY

[1][0] NO. OF DAYS EARLIER THAN . . . . . [6] 1 = STARR 2 = FLORUNNER 3 = FLORIGIANT 4 = VIRGINIA 61R 5 = NC - 2

[1][0] NO. OF DAYS LATER THAN . . . . . [8] 6 = NC - 5 7 = SOUTHEASTERN RUNNER 56-15 8 = OTHER (*Specify*) NC 17

4. LEAVES:

[2] COLOR AT 60 DAYS: (*Nickerson Color Designation*): 1 = LIGHT GREEN (10Gy 6/9) 2 = MEDIUM GREEN (2.5G 5/9) 3 = DARK GREEN (5G 4/7) 4 = OTHER (*Specify*) _____

[–][–] MM. LEAFLET LENGTH (*Basal leaflet of the youngest fully opened leaf*)

[–][–][–] LEAFLET LENGTH/WIDTH RATIO

5. POD: (Average for 20 pods at maturity)

[3][7] MM. LENGTH

[–][–] MM. DIAMETER

[4][2][7][5] KG./HA. POD YIELD

[0][0][2] % LESS THAN . . . . . [3] 1 = STARR 2 = FLORUNNER 3 = FLORIGIANT 4 = VIRGINIA 61R 5 = NC - 2

[0][1][3] % MORE THAN . . . . . [6] 6 = NC - 5 7 = SOUTHEASTERN RUNNER 56-15 8 = OTHER (*Specify*) _____

[8][7] % FANCY SIZE: (*% riding 13.46 mm., 34/64 inch, spacing set on presizer roller*) 00008

76TQ 011

EXHIBIT D

ADDITIONAL DESCRIPTION OF THE VARIETY

Industry comparison of NC 6 with Florigiant, the cultivar most widely grown in the North Carolina-Virginia peanut area, indicated that the medium grade kernels of NC 6 have fewer splits after commercial blanching but was harder to blanch than Florigiant. NC 6 had a greater percentage of extra large kernels, fewer number one size kernels and had a slightly higher mill outturn than Florigiant. NC 6 had 9.9% jumbo pods compared to 2.2% for Florigiant. The jumbo pods of NC 6 had 6.7% cracks compared to 11.0% for Florigiant. NC 6 is equal to Florigiant in flavor for all peanut products. The shelf-life of NC 6 is superior to the shelf-life of Florigiant.

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL MARKETING SERVICE
Grain Division
National Agricultural Library
Beltsville, Maryland 20705

Rec'd 10/19/77

OCT 06 1977

AH-3416

Subject: Seed Sample of Protected Variety
Certificate No. 76TQ011
Kind and Variety - Peanut - 'NC6'
Breeder - N.C. Agr. Expt. Sta.

To: National Seed Storage Laboratory
Fort Collins, CO 80521

Attached is the above-identified sample and an Objective Description of Variety form in accordance with our Memorandum of Understanding and as agreed upon during my visit with Dr. Louis Bass on June 12, 1972.

One copy of this duplicate form showing the result of your germination test on 100 seeds of pure seed of this sample should be returned to this Office. Return of the duplicate form will serve as acknowledgement of receipt of the sample.

95697

Germination: 98% % Date: 01/78

J. J. Ballin

Commissioner
Plant Variety Protection
Office, Grain Division

Attachment

In duplicate

Additional seed & Exhibit C will follow as soon as we receive germination reports.

2/28/78 Received -

PEAN

PV No. 7605011

'NC-6'

An excess seed sample of this variety was returned to the PVP Office by the National Seed Storage Laboratory. The excess seed was destroyed by PVPO personnel on NOV 14 1994

NC 6 76TQ011

5. POD (Average for 20 pods at maturity):

[2] NUMBER OF SEEDS PER POD: 1 = 1 2 = 2 3 = 3 4 = 3–4 5 = 2–3–4

[2] CONSTRICTION: 1 = SHALLOW OR NONE (*Virginia 56R, Argentine*) 2 = MEDIUM (*Virginia 61R*) 3 = DEEP (*Starr*)

[1] SURFACE: 1 = GLABROUS (*Florunner*) 2 = PUBESCENT (*Florispan*)

[2] BEAK: 1 = ABSENT 2 = INCONSPICUOUS 3 = PRONOUNCED

6. SEED (Mature, cured but not aged):

[0 5] COAT COLOR: 1 = WHITE (*Pearl*) 2 = CREAM 3 = TAN (*Starr*) 4 = BROWN 5 = PINK (*Florigiant*) 6 = RED 7 = PURPLE 8 = DARK PURPLE 9 = VARIGATED 10 = OTHER (*Specify*) _____

[2] COAT SURFACE: 1 = SMOOTH 2 = INDENTED [1] 1 = UNIFORM COLOR 2 = BLEMISHED

[4] SHAPE: 1 = SPHERIODAL (*Starr*) 2 = SHORT-BROAD (*Florunner*) 3 = ELONGATED-SLENDER (*Dixie Runner*) 4 = CYLINDRICAL-TAPERED ENDS 5 = CYLINDRICAL-BLUNT ENDS (*NC–2*) 6 = OTHER (*Specify*) _____

[- -] MM. LENGTH [- -] MM. WIDTH [9 1] GRAMS PER 100 SEED (*8% Moisture*)

7. DISEASE RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[1]	SOUTHERN STEM ROT	[0]	RUST
[1]	EARLY LEAF SPOT	[0]	VIRUS X
[0]	SOUTHERN LEAF SPOT	[0]	MOSAIC
[1]	POD ROT COMPLEX	[ ]	OTHER (*Specify*) _____

8. INSECT RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[1]	THRIPS	[0]	BURROWING BUG
[2]	LEAF HOPPER	[0]	NEMATODE (*Specify species*)
[2]	SOUTHERN CORN ROOTWORM	[0]	LESSER CORNSTALK BORER
[0]	APHID	[ ]	OTHER (*Specify*) _____

9. COMPARISON OF SUBMITTED VARIETY WITH ONE OR MORE SIMILAR VARIETIES:

VARIETY	OIL* (%)	PROTEIN* (%)	OLEIC: * LINOLEIC ACID RATIO	IODINE* NUMBER	SHELLING (%)	SMK** (%)	ELK+ (%)	MAIN STEM HEIGHT (CM)
SUBMITTED	45.57	31.25	-	92	73	68	43	25
SIMILAR	48.06	31.15	-	94	72	68	34	25
NAME OF SIMILAR VARIETY	Florigiant	Florigiant		Florigiant	Florigiant	Flori-giant	Flori-giant	Flori-giant

* *From Sound Mature Kernels* ** Sound Mature Kernels + Extra Large Kernels

10. INDICATE A VARIETY WHICH MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	VARIETY	CHARACTER	VARIETY
POD COLOR	Florigiant	SEEDLING VIGOR	Florigiant
SEED DORMANCY	NC 5	HULL THICKNESS	Florigiant
SEED SIZE	NC 17	LEAF COLOR	Florigiant

11. COMMENTS (Additional description or clarification — Such as: Relative disease reactions may be compared with standard varieties)

00009